ROD E Custom

July 1954

250

HOW TO DO IT :

FRAME

CUSTOMIZED

PICKUP

PAGE 8



ENGINE PORTING - WHY & HOW



T OP TWO

FOR TWO

SEE PAGE 34

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Triple chrome, heavy gauge metal.

DURABLE, finished to a high lustre.



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Complete kit with instructions.

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set of four with locks Regular price was \$99.50

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49-52, 54 Ford 49-51 Merc 53 Ford......\$7.50



Specify make & year. Triple chrome heavy steel.

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FORD, MERC 37-54 all
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AVAILABLE FOR MOST ALL CARS

AVAILABLE FOR MOST ALL CARS

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Perfect for dechroming, smoothing-in seams, repairing rust outs. A real goodie! No leading, welding, or soldering necessary. Enough fibergias & plastic for 3 sq. ft. Easy application. Other larger kits also available.

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DUAL KIT 15 FT. WIRE (2 AERIALS) 1250

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ONE PIECE, FULL HOOD LENGTH, installs in place of original unit. Stainless steel, polished to a chrome-like luster. Specify make and year



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Beautifully chromed, replaces old rims. Fits Chev., '42-53; Plymouth, '49-54; Bulck, '49-52; Dodge, '49-54; Nosh, '49-52; Koiser, '47-52; Olds, '48-50; Pontiac, '49-52; Ford, '41-51; Merc., '41-51; Cod. '50-53



CUSTOM

CHROME KNOBS



WIRE WHEEL DISCS





Grille Conversion Kit \$795

1949-50 FORD Converts hood and grille without removing present moldings.

Kit with stundard model solid grille ber \$24.95 (Has center dress-up molding) Kit with deluxe model solid grille bar \$27.95 (No center dress-up molding)

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Replace all black knobs with these identical chrome beauties, 17 knobs in set.



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Massive appearance. Beautifully chromed.

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Free Flew Exhaust Header Sets Increases power, mileoge and engine life. Deep mellow tone. Complete with headers, extensions, tall pipe, 2 steel-packed mulmors & brackets. Specify make and yr. Ford & Mercary, '35-53, \$33.95

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Correspondence

MORE BACK ISSUES?

I am a steady reader of your magazine and to prove it I have all of the back issues except November, '53 — apparently someone borrowed it and has never returned it! I motice that November is not on the list for your back issues. Does this mean you are out of them? How can I get ahold of one?

Carl Hanson Lynnfield, Mass.

• Sorry, they're all gone. Maybe a reader somewhere has an extra copy. If so, Carl's full address is Maplewood Rd., Lynnfield, Mass.

PENDULUM PEDALS

Doane Spencer is to be congratulated for bringing the advantages of overhead pedals and a hydraulic clutch engaging mechanism to the attention of your readers. Though his setup is by far the best I have seen, it is not



the first. Take the English Ford Consul, for instance. It uses a similar arrangement except for the slave cylinder, and there are several others, too.

I began constructing my roadster over two years ago and as a solution to the clutch linkage problem, I also turned to overhead pedals and a slave cylinder to operate the clutch. Enclosed please find a shot of my master cylinder arrangement. The body, incidentally, is an old Dodge roadster which I believe beats the popular T for looks.

Emery Leisure N

Norwalk, Calif.

DRAG RACES, INC.

Drag Races, Inc., has been criticized, even condemned, by some whose sole aim it is to mislead the public into believing other than that which is true concerning this organization. Therefore, it has become necessary for us to send you this letter with the hope that it will be published so that the public may judge the merits and aims of our organization.

Drag Races, Inc., is a NON-PROFIT organization dedicated to protect and insure its members should they become involved in any accident while participating at any organized track. Heretofore, it has been of prime interest to pull the younger set off of the public streets and get them to limit their racing on the strips provided for such a purpose. Now that such places are in existence throughout the country, little or no interest is being paid to the still existing possibility of accidents which always prevail where racing and high speed are concerned. Thus, Drag Races, Inc., has been organized to help its members should accidents occur to the extent of \$300.00 per person, depending of course upon the complicity of the accident.

Membership is open to everyone. The sole requirement is an active interest in drag racing.

The organization has a point system in effect for participants within the club. Trophies and awards are given at the end of each racing season.

Members of Drag Races, Inc., are invited to take part in all social events brought about by the organization.

Drag Races, Inc., holds sanctioned meets at various tracks. No guarantee, percentage or purse is requested or expected of the track officials, promoters, etc.

At any time this organization will run a fully sanctioned meet at any track in the California area. We do not demand or expect any remuneration in return.

Peter Lisa

Drag Races, Inc. Los Angeles, Calif.

ROD AND CUSTOM, JULY, 1954

STEAM CONVERSIONS

In the March ROD & CUSTOM's editorial column you spoke of present day steam conversions. Would it be possible to have the names and addresses of the people and/or companies involved? I am very much interested in automotive steam propulsion and would like more details.

I like the way your magazine covers the various phases of the automotive world and would like to see it kept that way.

Thank you for whatever information you might be able to provide.

Arthur Glick Long Island, New York

• Sorry, Art. There is much more behind modern steam conversions than merely designing a small but efficient powerplant. For that reason those people presently working on the problem prefer to remain anonymous until, as they say, the proper time.

SUGGESTION DEPARTMENT

I liked your Attention Detroit articles but how about giving our manufacturers some suggestions instead of merely criticism.

The new GM cars, for instance, with the panoramic windshields, provide unmatched visibility—when the weather is clear. What's the use of all that glass when the wipers clean only as much area as they formerly did with the conventional windshields? What we need is something that would clean the entire windshield, not just part of it.

Maybe it would be a good idea to install some type of wipers in the side windows, too. For instance, a squeegee type wiper that would clean the glass by rolling the window down and up again.

K. L. Y.

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Milwaukee, Wisconsin

• GM's experimental Buick XP-300, equipped with the wrap-around windshield, had 4 wipers. Two in the normal position and additional wipers for the extreme ends of the glass. They've incorporated scores of ideas into their production cars from the XP-300, and their many other experimental models, wonder why they haven't used the 4-wiper idea? Good question.

DEFINITIONS

Thanks for printing the definitions in your February issue.

My husband is always using many of these terms and I was embarassed to ask him what they meant. Now, with your help, I really know what he's talking about and he's none the wiser.

How about some additional definitions. I'm sure I'm not the only wife who tries to under-

stand car lingo.

Mrs. R. Lore Philadelphia, Penna.

ROD AND CUSTOM, JULY, 1954

NEW WAYNE G.M.C. CATALOG & "HOW TO DO IT" MANUAL

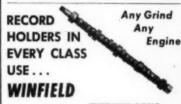
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list

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A farm community is not a locale for a custom car, so Nick Cozzitorto turned to a pickup truck as a basis for his customized transportation. Intended originally as a service vehicle, this '52 Ford ½ ton pickup has become an eye-stopper through extensive alterations and modifications.

PACE-SETTING PICKUP

Originally a drab pickup, this truck has become outstanding through the magic of customizing.



Custom shop proprietor Gene Winfield is no stranger to the readers of R & C. His work has graced many a page in past issues. Here, though, for the first time, Gene has lavished long hours on a pickup truck - a '52 Ford half tonner, to be exact. The original intention of the truck was to haul whatever its owner loaded into it, but a purple lacquer paint job (see cover) and a sparkling white tarpaulin over the bed restrict the truck's use to hauling its owner only. And haul it does - for the engine has received as thorough a going over as the more obvious parts of the vehicle. Starting at the rear and working forward, Gene Winfield has eliminated the original taillight in favor of those from a '47 Chevrolet. The optional rear bumper has been freed of its former accessories and chrome plated in the best of taste. Aft portions of the rear fenders have been added to so the truck will appear far lower than in actuality. Total amount of rear end drop is six inches accomplished through the use of king-size lowering blocks. Axle-frame clearance was kept by kicking up chassis side rails and building a slight hump in the center of the bed floor.





Safely clear from damage by steep driveways or backed-into curbings, truck's exhaust is routed through inset scoop in rear fenders one in each. Flared skirts are '51 Mercury type, heightened to fully cover rear wheel cutouts. Trailing portion of fenders have been added to more closely match lines of the truck. Stock fenders are upswept out of danger's way should overload be on board. Center-mounted license plate is illuminated by small light artfully concealed by the bumper. When photographer Dean Moon asked truck's owner to park the vehicle in suitable surrounding - farmyard - Nick retaliated by saying that the truck is seldom driven over unpaved territory - besides, the color might scare the cows. Instead of scaring them, it aroused their interest as may be seen by glancing at the heifers on the cover. After determining that what they saw wasn't the proverbial purple cow, the twins wandered off in search of something more palatable. Interior of truck has received as much attention as exterior - this time in form of cream colored leatherette.





The only available louvering machine was not equipped with an extension capable of reaching the area decided upon for the ornamental, as well as functional, vents, so Barris Accessory louver plates were welded to the hood sides and later frenched in, thus eliminating the unsightly welded seams - a neat trick for those hard-toget-at areas where louvering is needed to add that certain touch. The louvers provide the engine compartment with added ventilation - thus answering the question of whether a "warmed over" mill needs cooling. '52 Ford block has been bored to 3 5/16 inches and stroked 1/4 inch. An aluminum flywheel cuts down revolving weight adding greatly to initial acceleration. Clutch is Auburn. Heads and three-carb manifold are by Weiand, cam is Iskenderian. Transmission contains a full set of Zephyr gears. White walls, like the white-tarped, purple-sided bed, are not conducive to the type of roads found in farm communities so the truck has been necessarily limited to action on paved highways - and drag strips, naturally. Proximity of front end to ground has been achieved through the use of a 31/2 inch dropped axle.

Freed of unnecessary or ornamental "garbage", the front of the Ford hauler features chromed grille assembly, guard-free bumper, dual spots and four-inch-lower turnet top unit. Aside from being still rather scarce as customizing bait, pickups are popular due to their simplicity of construction and lack of too many ornamental gee-gaws. Shave the hood and doors—prestol—a conservatively, but effectively, restyled pickup truck; Chevy, Stude, Ford or what have you? Radical lowering is within reach with few modifications due to extra axle-frame clearance of chassis for weighty loads.





Original frontal appearance has not been greatly tampered with other than the removal of the hood ornamentation and the re-chroming of the grille assembly. Painted headlight rims have been replaced with the deep-set rims from a '51 Mercury. Vertical grille guards have been eliminated to rid the truck of as many vertical lines as possible, the intent being to cause the vehicle to appear as low and wide as possible. Pickup trucks of all types are currently receiving their share of attention all over the country as enthusiasts are turning more and more from the run-of-the-mill cars - roadsters, coupes, sedans and convertibles. Though of limited passenger capacity, a drawback of the earlier model cars, the bed provides space enough for the most avid sportsman who wishes to double his mode of transportation's value by making it a home as well as a means of traveling from one point to another. The bright paint job causes stares from neighboring farmers who feel that a truck is only a truck and was meant to stay that way.

Body man Gene Winfield, under the watchful eye of truck owner Nick Cozzitorto, hacksawed four inches of metal from the vertical sides of the truck's turret top. Headroom, over-sufficient in the first place, has not been greatly hampered by the chopping operation. Rear window opening has not been reduced as much as the extent of the chop job. (Alteration method is identical to that of R & C's pickup. "Top Chopping" in May '54 issue.) Elimination of unneeded external hardware cleaned up considerably the fine basic lines of this popular model hauler. This result of Gene Winfield's labors is his sec-

ond cover display, the first of which appeared on the June '53 edition at which time two of his products were glamorized at the same time — one Rod and one Custom. Aside from his customizing trade, Gene caters to competition-bound enthusiasts and he drives both modified stock cars and track jobs in and around the Modesto area in his spare time (?). His own private garage includes a conservatively customized Mercury Monterey (R & C for April '54) and a street roadster which is rapidly nearing completion. Needless to say, these pages will be graced by the latter upon its completion.



ROD AND CUSTOM, JULY, 1954

illac ohv V8 has square shaped ports to begin with. These, of course, are not rounded in porting but are left square.

Sometimes to obtain the most efficient porting the ports must be enlarged, at other times just polishing them will accomplish the purpose. How is one to know when to do what? Let's consider a hypothetical case. Suppose the intake valve of a certain engine is measured and found to be 2 inches in diameter. The port leads smoothly to the valve with no variations in area and on measurement is found to be 13/4 inches in diameter. All the owner would do in this instance would be to polish the port. To enlarge it beyond its 13/4 inch diameter would remove needed metal from the valve seat. The diameter of the port cup - that section of the port directly beneath the head of the valve - must of necessity be smaller than the diameter of the valve head since it mounts the valve seat. Carrying this example to a ridiculous extreme, if the port is ground out as large as the head of the valve, there would be nothing left for the valve to seat against. Now, the width of the seat is measured across its diameter, not parallel to its angle, and is between 3/32 and of an inch for all passenger car and racing engines which are apt to be encountered.

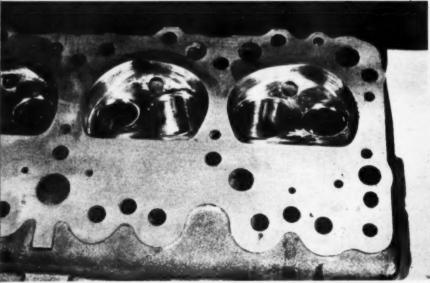
For maximum breathing (the reason for

porting in the first place) the port is enlarged to the diameter of the value head minus twice the width of the seat. Thus, in our hypothetical engine, if the valve diameter is 2 inches and the width of the seat ½ of an inch, the port is ground out to a maximum diameter of 1½ inches. If, for the same size valve, the seat width is found to be, at its maximum dimension, 3/32 inches, the port will be enlarged to a diameter of 1 13/16 inches. Larger than this we dare not go.

Visual inspection of the port will often tell us whether simple polishing or metal removal is called for. In the cases of the new ohv V8's — the Olds, Cadillac, Buick, Chrysler, DeSoto, Lincoln, Mercury, Studebaker and Ford — the ratio of port size to valve diameter has been kept pretty close. Not much metal need be removed from these ports except as occurs from casting variations.

A further example of looking before one leaps is found in the 6 cylinder ohv GMC truck engine, which is gaining more adherents in drag racing and track work. While the intake valves of this engine are of 1½ inches diameter and are not replaced by larger valves, the port area is small and restricted, thus requiring a good bit of porting. If you own this engine's smaller brother, the Chevrolet, you are wiped out unless you enlarge

The induction system of an overhead valve V8 can be greatly improved by careful porting. After the final polishing, the intake ports take on a clean and well-polished appearance. Valves are always seated after porting since a slip with the grinder could scar the seats.



both the valves and the ports.

PORTING EQUIPMENT

Necessary equipment depends upon the engine to be ported. For any port whose length is over 2 inches as is found in the flathead Ford, Mercury or Cadillac, a flexible shaft (similar to the item used by your dentist) is required, while for more accessible ports such as in the ohy MG, Olds V8, Chevrolet, Ford and Merc you could employ a large portable hand grinder or high speed electric drill. It is well to realize that mounted grinding wheels and points are designed to operate most efficiently at speeds ranging from 38,000 rpm for a 1 inch diameter stone to 152,000 rpm for a stone of 1/4 inch diameter, none of these speeds being within the capacity of generally available grinders. Perhaps the best compromise is the 15,000 rpm Dumore No. 9 hand grinder of 1/4 hp, or any similar die grinder, though any hand drill of close to 4000 rpm may be used.

The stones that do the actual metal removing come in many standard shapes and all may be gotten from hardware dealers or auto supply houses. One of the most useful, particularly for use in Ford and Mercury flathead engine ports, is type A-25, a spherical stone of 1 inch diameter. (See illustration.) Type A-21 is a mushroom shaped stone of the same diameter which is nicely adapted to blending contours while the similarly-formed type A-22 of 3/4 inch size is employed in smoothing smaller radii.

All of these stones are prepared in varying grit sizes. For removing large amounts of metal a 30-grit is called for. Under no circumstances should any grit finer than 60 be used

in porting work.

Steel burrs, much like those used by dentists in torturing us but in diameters of from 1 inch to 1/4 inch and smaller, are excellent for the rapid removal of cast iron and are more efficient as well as longer lasting at far slower speeds than abrasive stones. They leave a rough "pleated" surface which must then

be polished. Sanding drums are 1 inch or smaller cylinders of abrasive-coated cardboard which, when mounted on an expanding rubber mandrel, are used for finishing the port. Lacking these, you can slot a 1/4 inch rod at one end, wrap a strip of abrasive cloth several times around the rod and use it in the drill for final polishing. The cloth continues to cut until it is completely worn away and by varying the grade of the cloth, close control over the quality of the finish can be had.

A bottle of machinist's layout blue should be on hand to outline the port area on the engine block and a machinist's scriber, a carpenter's awl or even a sharp ice-pick is employed in scribing the outline of the intake manifold gasket or other template around

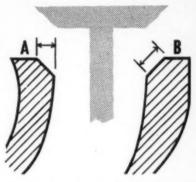
the intake ports.

ROD AND CUSTOM, JULY, 1954

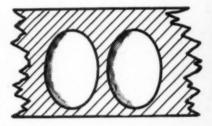
PORTING PROCEDURE

We will deal first with the engine most commonly ported, the flathead Ford V8, recognizing that the procedure is similar for other engines. Ford intake ports begin at a 45 degree angle to the block. This angle is maintained for about 11/2 inches when the port curves upward toward the valve. As has

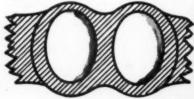
(Continued on page 62)



The width of a valve seat is always measured across its diameter, as at A, never as at B.



Shaded areas on block (above) indicate carbon formed by mismatch of manifold covering part of intake ports. By the same token, carbon is formed around parts on manifold, below. Carbon lines indicate port enlargement is necessary. Deposit is exaggerated in drawings for clarity.



BLACK 'N' WHITE...

By Danny Deuce. (As told to Lynn Wineland)

UP IN the Southern California hills a forlorn Ford rests in storage, awalting the day when its owner returns from the service of his country to once again enjoy the thrill of throttling along the freeways, headed for the cool mountains or the sunny beaches. Since the owner isn't around, perhaps his car can tell its own story.

"This is the city... Hollywood, California. I live here, I'm a coupe.

"It was March, 1954. I was carefully parked in my garage, put up on blocks, and left to wait on my owner. I thought I would reminisce of the good times we'd shared.

"I remember the day I first met Bob McNeil. It was a little over three years ago. I was getting along in years, being a '32 model, but Bob's eyes shone as he paid for me and drove me home with the idea that he'd make me, a three-window, one of the finest '32's to be seen. I couldn't complain about that, could 1?

"I was sure happy when he got those hydraulic brakes. I hadn't been stopping too well for a while and had a sore nose to show for it. Bob took the spindles, backing plates and drums from a '40 Ford and mounted them to a reshaped '32 front axle. It made me sit a couple of inches closer to the ground and, with the radius rods split and strapped to my frame for stability, I was starting to feel pretty confident.

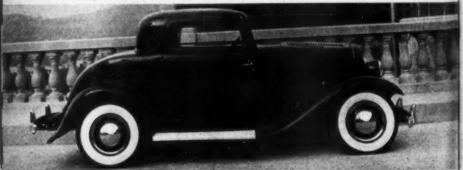
"Strengthening my hindside was done by installing a complete '40 Ford rear end, including brake units, after shortening the driveshaft and reworking my rear crossmember to accept the straight spring. My old pedals were rebuilt and linkage was made to operate the master cylinder which would actuate my new juice-brakes.

"New Gabriel shocks helped steady my wobbly knees and then I was fitted with new, white side wall shoes. Oh, those crazy sneakers! Five-ninety fifteens for the front and seven-tens for the rear were bolted to my hubs which tipped me a little to the front. They were the beginning of my black 'n' white look, too.

"Previous experiences had skinned my shins so I got some new ones: bumpers from a '41 Ford, all shiny and new. My headlight bar was reshaped, chromed and topped off with some nifty sealed-beams so we could see better. '41 Chevy taillights were carefully fitted into my back panel on either side of my license plate so others could see us.

"Yknow, I'll never forget the trip down to Chuck Porters Body Shop. We were loafing along down the road and I was singing to myself. A little tune called, "There'll Be Some Changes Made'. There were, too. Chuck cut my top off. Ouch! When he finally put it back on again it was 3½ inches lower and you couldn't even tell where it was done.

"If only all of my brothers could see me now. I'm not as high as I used to be but that isn't due to old age. It's partly due to my chopped top and to my smaller feet. Like me this way?"



...'N' LONESOME



All the Stockholds





"Some folks like blue eyes and some like brown. Mine are neither, they're clear as glass and shine like crazy. See how smooth my coat fits? It's like I was poured into it, or vice versa."

"I don't mind lettin' folks see my insides at all. I'm sorry now that I got sore at the guy who knocked the original stuffin' out of me. How did I know what he was going to do, hmm?"

"I'm not all black. My shoes and cuffs are now white. It doesn't show here but the center of my top and part of my interior are white, too. Wish Bob would come home. I'm gettin' lonesome."





"I didn't like the white rubber cuffs at first but, as they say, they sort of grow on you. Now I get mad when someone steps here but after all, that's what running boards are for, aren't they?"

"'Scuse me while I show off my muscles. I'm as proud of my modified '50 Merc, engine as Bob."





ROD AND CUSTOM, JULY, 1954

I was glad 'cause I'm pretty sensitive about having my surgery show. Chuck also filled my cowl vent and the top of my grille shell as well as taking out the little dents and dings I had gotten from my previous owners. After poking louvers in my hood and carefully sanding me all over to remove any little defects, I was presented with a new costume, glistening black lacquer.

"Textured white plastic replaced the old fabric insert in my top and my running boards were recovered with white wafflepatterned rubber to carry out the motif.

"It was sure thrilling to cruise around town with glances of admiration (and jealousy too, if you please) from all sides,

"But what about my interior? Clean though it was, surely Bob would continue the thorough rejuvenation process which had been so meticulously carried out thus far.

"Yep! Not long after this I was chosen to become a coupe of distinction, and we drove out to Calvert's Upholstery Shop in Burbank. I was left there with instructions to give me the works. Man! Those guys literally knocked the stuffing out of me! Before long I was but a hollow shell of my former self. A coupla days later, though, Bob came in to get me and I was all decked out in rolled and ribbed Naugahyde. The inside of me was black 'n' white from door to door and from floormat to headliner.

"I had my window frames chromed and then Bob topped off my white steering column and shift mechanism with a black '40 wheel. In the white center of my stock black dashboard are Stewart Warner instruments. Black and white, naturally.

"I thought that ole Bob was just on some kind of a kick with this color business, but he must have known what he was up to 'cause when we pulled into a drive-in, I was the center of attraction. I was pronounced as being cool, mellow, cute and even something called 'Zorch'. Is that good?

"You might think that for an old codger I'd be afflicted with hardening of the armature or somethin'. Bob thought about this and stuffed my engine compartment with a '50 Mercury engine complete with '48 Merc transmission. Then he added Edelbrock heads for higher compression, an Edelbrock dual carburetor manifold and a Weber ¾ cam so I could breathe easier. A Mallory ignition put a little more spark in my step.

"B' gosh, I sure got a charge out of blowin' a little smoke through my headers and kickin' up my heels when I dusted off some of those young whipper snappers that most folks drive.

"I know that Bob has big plans for me when he gets back in a year or two, and I can hardly wait.

"I sure miss that boy. Seems like he did as much for me as Henry did."

Here's the formula for good restyling:

Take one Ford 2-Door.

Add a body man who knows the score.

Mix together for three weeks.

Result?

ONE FINE FORD

Photos by Spence



ONE OF the most interesting things about this car is that it looks as though it is stock. Heads turn as it is driven down the street but the onlookers are generally at a loss to say what it is about the car that attracts their attention. The car doesn't drag its tail on the ground nor does it have small slits in place of the correctly proportioned windows as do so many radically altered cars. The car is comfortable to sit in, having adequate head and leg room, yet it is far lower in height than its counterparts of '50 Ford origin. Sectioning! That's what did it...a five inch section job.

This car was delivered to a body shop early in 1950 — over four years ago — with orders for a five inch strip to be removed from the car's middle. Though scores of other cars have undergone a similar treatment since that time, this car, upon its completion, was one of but very few to be so reworked in this fashion. Needless to say, it attracted attention, and how, when it was delivered to the customer for the car was still in current production at the time.

Unfortunately the car has changed hands

several times since its completion and the name of the original owner, and the name of the shop responsible for the fine workmanship, has been lost. However, the car will probably remain outstanding for years to come — a credit to those behind its inception.

Aside from eliminating a strip from the center of the body all the way around, the grille, hood, deck lid and taillights have all been restyled. To continue, the door handles have been removed—the doors are electrically operated by a concealed pushbutton—and the obassis lowered just enough the bring the car within correct proportion to its height in relation to the overall size of the body.

A Kaiser floating center bar was fitted just inside the reworked top grille bar where it sits apparently unsupported. To clean up the front of the custom even more, the familiar Ford grille cutout in the hood was filled and the headlights frenched. The lights are now easily adjustable from beneath the fenders.

The interior door, quarter and kick panels had, like the body to be reduced five inches in height to conform to the design of the





planner. The seats, too, were dropped in relation to the floor and the seat backs sectioned so that their top edges are flush with the window sills. The interior color scheme is chartreuse and green.

Probably every owner of the car has had his own likes and dislikes regarding exterior colors so the car has been repainted several times, at least. At the time the accompanying photos were taken the car was a deep metallic green but just before presstime owner Mike Stone drove up in the car — nainted white!

green but just before presstime owner Mike Stone drove up in the car – painted white!

The engine is presently to be replaced with either an Olds or Cadillac obv V8 but in the meantime the fine looking little car is propelled about the Los Angeles area with its original V8 mill.

Equipment includes an Edelbrock dual

manifold and a Winfield R-1 cam. Exhausting is via a set of mellow sounding mufflers. No roar, just a quiet whisper.

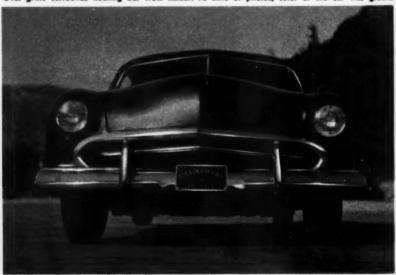
Other than a little head milling the engine is as it was intended to be, giving just enough extra ocomph to make it readily noticeable. The chassis was lowered two and a half inches by adding four-inch lowering blocks

The chassis was lowered two and a half inches by adding four-inch lowering blocks in the rear and eliminating a spiral or two from the front springs. Before someone jumps all over our mathematics, the sectioning job resulted in the loss of enough weight to raise the car about an inch and a half.

All in all the original builder, whomever and wherever he might be, should be congratulated upon his fine work and upon his pioneering with this, one of the earliest '50 Ford sectioning jobs on record.



Patterned for simplicity, this '50 Ford underwent a five inch sectioning job early in 1950. Oval grille surrounds floating bor from Kaiser. At time of photos, color of the car was green.



ROD AND CUSTOM, JULY, 1954



Frenched light, simple grille arrangement and elimination of hood ornaments signifies one of the cleanest customs we've featured. The front plate shows owners membership in club composed of members living in Phoenix, Arizona, and Los Angeles, Calif., thus "Calazonas" and "Los-Nix".

Taillight detail shows lense set flush with the bumper guard. Fairings for original lights have been removed. The deck lid is electrically operated from a button on the instrument panel.



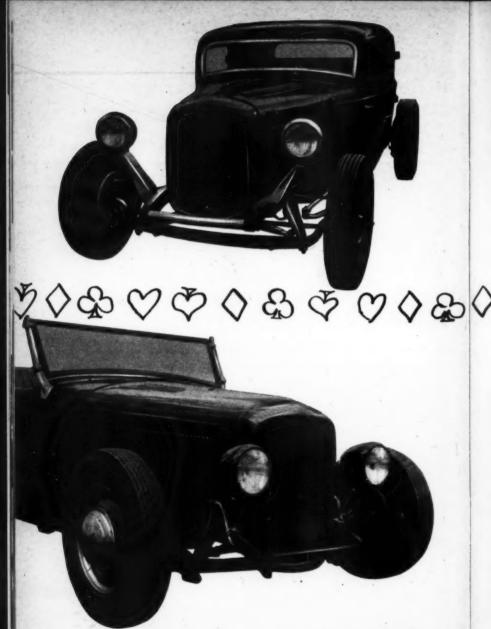
ROD AND CUSTOM, JULY, 1954

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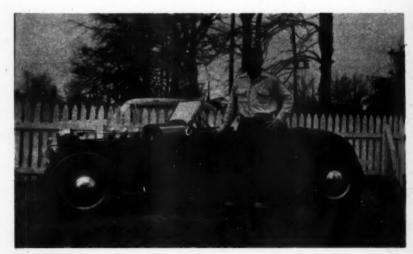
ROD AND CUSTOM, JULY, 1954



The South takes to hot rodding.

A PAIR OF TENNESSEE >>> ♥ ♥>>> DEUCES >> ♥♥♥

Photos by Spence



ROD AND CUSTOM, JULY, 1954

WRITERS DEDICATED to transcribing the history of the United States have, throughout the ages, written of the South as being a land of easy-going tranquility, an area dedicated to kicking off its shoes and sleeping in the warm sun, a section of the U. S. that lives only from day to day and seemingly doesn't care much what happens tomorrow. This holds true even today. One of the results of this, to bring up the subject of hot rodding, is that little has ever been heard about Southern hop ups. If one chooses to follow the old saying, "Seek and yo shallfind", though, one can turn up a scattered but interesting assortment of fast-moving machinery. Cars that would make the more progressive East, West and North sit up and take notice.

ROD & CUSTOM, a few months ago, decided to see what it could turn up in the land of southern hospitality. A careful combing of the Tennessee area brought to light two interesting, and well built, '32's of which the South can well be proud. Like the other, more rod-advanced sections of the country, Tennessee is discovering that these 22 year old cars are as good, or better, a basis for a fine rod as anything else. Though they are becoming somewhat rare in and around the interest-concentrated portions of the country, they are reasonably plentiful in Tennessee, however years of inclement weather have played havoc with the bodies and rust and corrosion can be had in unlimited quantities.

This was much the condition of the old '32 roadster that Budgie Haley brought to his home in Memphis. Despite parental objections and the too-obvious snubbing by friends of long standing who were convinced that he was nuts. Budgie pitched into the work he had cut out for himself and within a year put the finishing touches to the car that he had wanted for so long.

Budgie cut the floor from the body and repositioned it six inches higher than it was originally. Replacing the body on the frame, Budgie found that the frame rails were now invisible and the car had become a good deal closer to the ground. By kicking up the rear of the frame and positioning a dropped axle under the front end, the car's ground clearance was reduced far enough to meet with Budgie's desires.

Cockpit area always becomes much less plentiful after a channel job so the owner made room for himself inside the car by dropping the seat to floor level. Additional leg room was obtained by installing the column shift transmission from a '40 Ford which, incidentally, contains a set of Zephyr gears.

The badly corroded suspension and chassis parts were diligently cleaned and those parts rusted or worn beyond repair were replaced. All unwanted, exposed holes in the frame rails were filled and, after a thorough steam cleaning, the chassis was carefully painted.

Body work was limited to outer door handle removing, cowl filling, windshield chopping and a little seam frenching. This required little in the way of metal work as compared to the de-denting of the body and the complete replacing of the rusted-out lower quarter panels. The uninitiated, but interested, people who come in contact with Budgie's roadster are aghast when they learn that countless hours of work went into the body. They think of the body as probably being dent-free in the first place but Budgie sees to it that they are told just what restoring a 22 year old body entails.

The car's stopability was greatly improved by the substituting of late hydraulic brakes instead of the older, rather unreliable, me-

chanical type.

Thus far the job had taken nearly six months of hard work but the builder continued relentlessly as the car finally began to look like something. After a good bit of consideration, Budgie finally decided to go Fordall the way and use the old reliable flathead V8 engine. Into a post-war Mercury block went a Winfield R-I cam, a set of oversize Speed-O-Motive pistons, a bore job and the always beneficial porting and relieving operations. The mill was topped off with a set of Edelbrock heads and a three-carburetor manifold of the same make. Exhaust leaves the 276-inch engine via a set of laboriously-built headers leading to a pair of straight-through type mufflers. To be used only for draggin', each head pipe has an outlet with an easily

removable cap — Tennessee lakes plugs!

Black lacquer paint and red leather upholstery brought the car up to Budgie's exacting standards and completed the year-long project for the time being approximately.

ect, for the time being, anyway.

Budgie has a long list of the parts slated for arrival at the chrome shop in the near future. The delivery date, however, must wait until the plating shop and Budgie can reach an agreement price-wise.

The black deuce will put in an appearance at the nearby Halls drag strip as soon as Tennessee's changeable weather settles down and becomes reasonably reliable.

To sum up, the car's performance can be considered outstanding if one looks upon the project as being pioneered by an enthusiastic builder far from the land of plenty — plenty of speed and custom shops, that is.

OUR SECOND car from down South is the prized possession of Jack Friend, also of Memphis. Like Budgie Haley, Jack chose the '32 Ford as a starting point in his quest for a one-of-a-kind car but unlike the former, Jack turned to the enclosed body style in an attempt to beat the weather situation — which gets rather severe at times. The car was origi-



Pontiac taillights flank license plate. Coupes, somewhat rare in other portions of the country, are amazingly plentiful in the South. 3-window cars are the most popular below Mason-Dixon line.

Padded dashboard features scrolled panel insert with a full array of Stewart Warner instruments. Column shift and '40 Ford wheel complete cockpit. Car always presents an unusual sight in Memphis.



ROD AND CUSTOM, JULY, 1954

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Tube shocks mount midway on headlight arm One piece, lauvered hood conceals 276 cu. in. engine. Mill scattered during drag meet and is presently being rebuilt for coming season.

Power plant of the roadster is this 59A black complete with internal modifications and added accessories. Though potentials are promising, car will not be clocked until summer arrives.



nally acquired in much the same state of dis-repair as the preceding readster. Rust and corresion had taken over much of the chassis and lower body sections and it took a great amount of hard work to bring it up to its present fine state.

The project at hand was begun over a year ago by removing the body from the frame. The chassis was completely disassembled—the unusable parts going into one pile and those considered salvagable into another. Unfortunately, the unusable pile outgrew the stack of parts which could be repaired so many trips to wrecking yards and Ford agencies were needed before the necessary components were gathered for assembly.

Parts came from many cars of various makes and models. A retired '41 Ford, for example, provided the brakes and master cylinder as well as the rear end, transmission

and foot pedal assembly.

With the chassis fairly well under central. attention was directed to the body - or what there was of it, that is. Rusted sections were eliminated completely and new panels welded in their places. The grille shell, cowl and various other portions of the body received a thorough hole- and dent-eliminating.

A cutting torch relieved the body of its flooring after which a great amount of welding was necessary to reposition it back again. Silly? Not if the floor is replaced seven inches higher in the body than it was originally thus giving what amounts to a rather severe channeling job.

The original fabric top insert, and the leaks always accompanying this method of body construction, was disposed of entirely and a steel panel welded in its place. This not only serves to add strength to the body but cleans up the outward appearance of the finished project as well. It is, however, a job of no small proportions.

The car, at last, began to take shape when the body was replaced on the frame and securely fastened down with new brackets made of heavy gauge steel. Ground clearance was found to still be higher than the owner expected so the rear crossmember was raised several inches which, in turn, dropped the rear of the car by the same amount. A stretched and dropped '32 axle brought the front end down to a correspondingly low level.

The newly acquired '41 differential was fitted with a set of 3.78 gears while the transmission was filled with cogs from a Zephyr.

The engine compartment was adequately filled with a bored and stroked 59A block that includes an International cam, an H & C ignition system and a pair of Offenhauser heads with an approximate compression ratio of 11 to 1. Offenhauser also provided the three-jug manifold thus taking care of the carburetion department.

When at last the coupe was ready to roll it was given a good going over with a spray gun filled with bright red lacquer after which the car was taken ninety miles northward to Halla, Tenn., to the tocal drag strip. The first warm up run through the strip convinced the owner that he had hit upon the right combination the first time out. Returning to the starting line, and with all eyes upon him, he streaked out of the chute only to scatter the big engine at the half-way point. Jack shut off, coasted past the lights and sadly turned out to await a push from his friends. He was later surprised to learn, however, that despite the mishap and the power-off run, he had turned an exceptional 86.00 mph.

A new engine is presently "in the works" at Memphis' Chelsea Auto Parts, where Jack is employed, and come this summer big things are expected from this outstanding Southern three-window.

With two choice '32's kicking things off, it shouldn't be too long until the South becomes recognized as one of the newest hot rod centers. There are already a number of clubs in the area, including the Rodders, dedicated to safety and preventing illegal street drags. The top time so far at the drag strip is 126.00 turned in last summer by the Dire-Long rail job. That's really screaming in any man's language — regardless of location.



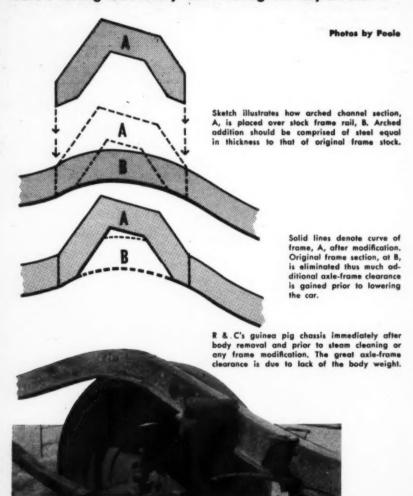
The Ford has been stripped of unnecessary ornamentation as well as fenders, running boards. Bumper guards secured to frame horns eliminate need for commonly used norting bars or bumpers.



Planning on lowering your car? Prevent "bottoming" by increasing axle-frame clearance with...

FRAME ARCHING

R & C's rolling laboratory and ... Progress Report No. 3



NOW THAT R & C's rolling experiment has had its lid lowered and is presently awaiting the sectioning treatment, let's jump from the body to the frame for a moment and see what's going on in that department.

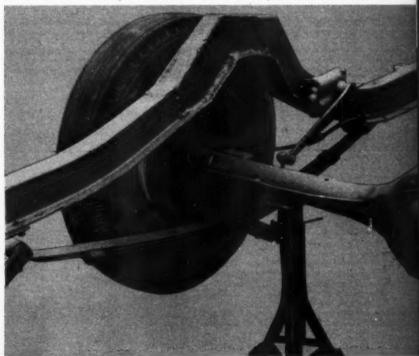
As you undoubtedly know by now, the car is, or will be, primarily a '54 Chevy pickup mounted on a '41 Chevy chassis with an Olds V8 with Hydra-Matic to provide motivation. We have asked that you readers send us suggestions, no matter how radical or extreme the ideas may be, so that we can carry out your experimental ideas on our car thus saving the reader the expense and trouble of reworking his car and later finding that the idea was not so hot after all. As of this writing the suggestions are beginning to trickle in but more are expected as our readers warm up to the idea. You'll probably die laughing at what we have in the way of a suggestion for next month, but for the time being let's

go over to the Valley Custom Shop and watch them Z, or arch, our frame.

The frame-arching process is being undertaken in an attempt to foresee the inevitable suggestion, "Why don'cha lower it?". To be prepared for this, as long as the body is not on the frame, we called proprietor Neil Emory to inquire when we could bring him the chassis. Valley is generally quite busy and as such must ask their customers to make appointments quite far in advance. Smaller jobs, however, are taken as they come. To our surprise Neil suggested that we bring the chassis over right away since the job would not be in the shop for any great length of time. No sooner said than done.

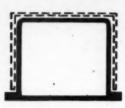
Aside from changing the springing and the front steering geometry (unless properly done) the primary trouble with a radically lowered car is that the axle and the frame often come in contact with each other with the result

The frame as it appears today. Despite lack of body weight, frame is much lower than it was originally due to de-orched springs and a set of temporary lowering blocks. The final ground clearance will depend upon our readers. Stock clearance still is maintained despite the fact the frame is nearly six inches lower than it was in photo taken before alterations.



ROD AND CUSTOM, JULY, 1954





Fully covered in Accessory Installation for September '53, front suspension was dropped by extending spindle arms and raising upper A arms. The job was completed over a year age. Cross section view shows new channel section, dotted lines, as fitted over the stock frame, solid lines. Arc welding, instead of gas weld, insures maximum weld penetration, essential.

that the occupants of the car are subjected to a ride somewhat similar to that provided by a loaded dump truck with square wheels. This, of course, holds no particular appeal for us. Not knowing how much we would eventually be asked to lower the pickup, we told Neil to arch the frame as high as possible as long as he was at it.

Chevrolets are equipped with long, parallel leaf springs in the rear. Each spring is secured to the frame ahead of the axle with a means for it to pivot. Shackles at its rearward attaching point give the spring a chance to change its length as its arch is increased or decreased as the car passes over uneven surfaces. Foreseeing the possibilities of axlebottoming on an overloaded car, Chevrolet (as do most other cars) has added rubber bumpers to the frame to somewhat lessen the shock when bottoming occurs. A stock Chevrolet has approximately six inches of downward chassis travel before the bumper is encountered. Therefore, a three inch lowering job would halve the amount of axle travel. Many enthusiasts, in an attempt to lower their cars as far as they possibly can, have taken the rubber bumpers off thus gaining an additional two inches of clearance. This, of course, is a very bad practice. There is danger of damaging the axle, the axle housing and the brake lines, should the frame and axle contact each other violently. In preparation for a radical lowering job but wanting the result to provide a ride equal to that of the stock car, Neil suggested we go up approximately five inches with our frame arch. (To exceed this imposes undue stress on the frame rails.) Thus, with the rubber bumpers remounted we would have additional axle-frame clearance and could lower the car as much as five inches yet still maintain the stock clearance. By lessening the size of the rubber bumpers we could also gain another inch or so of travel. Therefore, a five inch arch should take care of all future lowering suggestions by our readers.

ering suggestions by our readers.

The job was begun by acquiring several lengths of steel plate equal in thickness to the Chevy frame. These were carefully laid out and arc welded together in the form of a piece of arched channel iron (See sketch). The inside width of the channel was the same as the outside width of the Chevrolet frame, thus the channel could be snugly fitted over the stock rails. As soon as the arches were complete, Valley's Joe Coss slipped them over the frame directly above the axle and arced them into place. Sparks flew as the welder went into action and within a very few minutes the additions were rigidly affixed to the frame side rails.

One of the major problems associated with this type of work is the proper alignment of the frame. Welding induces heat to the frame and heat can do a lot of damage if it is applied incorrectly. Joe cross-measured the frame after the newly welded additions had cooled and announced that everything was as it was intended.

A cutting torch eliminated those portions of the stock frame directly below the arched sections. This is where the added axle-frame

clearance is gained.

As before, Joe checked out the frame again to be doubly sure that it had not warped or dropped out of alignment.

Boss Neil explained that welding in the new arches before cutting away the stock frame insures reasonably accurate frame alignment whereas had the arches been added after the stock frame had been severed there would have arisen much unnecessary work and the frame would have had to be jacked back and forth until correct alignment was once again regained.

The fourth sides of the added channel sections were boxed in as soon as they were exposed with the eliminating of the stock frame. A third check with the steel tape showed that no distorting whatsoever had resulted to the frame and the job was therefore complete.

The project, though not necessarily com-plicated, was made much easier because the body was not in the way to interfere with the work. Enthusiasts wanting their frames similarly reworked must expect to pay roughly \$150.00 for the job. Neil points out, though, that if a car owner comes to the shop with

his trunk flooring already cut away and the owner supplies the arched channel section, requesting only that the arches be welded to the frame and the original frame cut away, then the fee would drop below \$50.00. It must be remembered that we are not yet concerned with the aft portion of the body, or the bed, so have no drive shaft tunnel, back seat location or accessories to contend with as would the owner of an assembled, stock automobile.

Just for the record, our front suspension was dropped via the Valley Custom Shop method of extending the spindle arms and raising the pivot point of the upper A arms. A full description of this operation need not be given here since it was thoroughly covered in Accessory Installation for Sept. '53.

That brings us to the end of our guinea pig's alterations thus far. As stated previously, next month will see a very unusual modification. Even the reader that suggested it termed it practically ridiculous - but to prove that we are going about this thing with a completely open mind, we saw to it that the idea was carried out. Don't miss Progress Report No. 5 next month.

Valley Custom Shop's Joe Gass dons a welding mask and puts the finishing touches on added frame arches, lower side of addition was arced in position after elimination of stock frame.



ROD AND CUSTOM, JULY, 1954

THERE IS something intriguing about a Model T. Maybe it's because they are so ungainly looking, or because they were so popular years ago, or because they are light in weight yet rugged. Whatever the reason, the T will long continue to hold a position of high esteem in the eyes of many enthusiasts the world over.

Take Charles Martin of Menlo Park, Calif., for instance. When the rod shown herewith was still nothing but a dream, he decided that parts from a T should provide a good portion of the car's makeup. From the outset he searched high and low for T components - picking up some parts here and others there. As eoon as his knowledge of the where-abouts of T parts had been exhausted, he satd own to take stock of the equipment he had on hand - and this is what he found:

One bullet-ridden '21 roadster bucket; part of a '25 tail section (complete with rust); two '27 springs - one front and one rear; one pair of bent, but repairable, '27 frame rails: a '27 frame rear crossmember and a T radiator and shell.

Though many people would have considered this assortment nothing more than junkyard bait, Charles considered himself as being well along the road to the actual construction of his car.

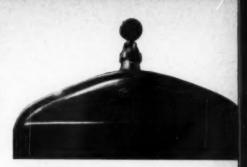
Four barrels never die - they were just made that way.



Naturally, many more than the above mentioned parts are necessary for a complete Rod so Charles dug up a '33 Model C engine, and transmission, a set of 16" wheels, a '40 Ford rear end assembly and a dropped '32 axle complete with accessories.

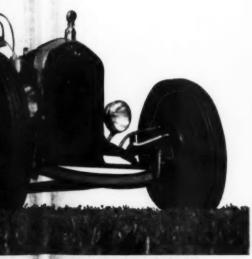
This acquisition was enough to set the owner to the task of cleaning, straightening, repairing and overhauling in general each and every piece of the car-to-be. As is generally the case, many of the parts had to be altered for any one of many reasons. Take the rear end assembly, for instance:

The '40 Ford housing was disassembled then, after replacing such parts as were worn



TWO







ROD AND CUSTOM, JULY, 1954

or damaged beyond repair, it was reassembled with the axle housings rotated 180 degrees around the center housing from their original location. This placed the spring hangers ahead of the center section instead of behind it which eliminated the necessity of having to extend the frame side rails and the rear crossmember further rearward than was absolutely necessary.

After several months had passed, the car was brought to completion and completely and thoroughly covered with a lacquer paint job of brilliant Coral Flame Red. (See cover.)

Not content with the original output of the rare, Model C four cylinder engine, Chuck tore into it in a big way. The bore

was increased .100" bringing the amount of volume displaced by the cylinders up to 211 cubic inches. The cam was replaced by one from Iskenderian's shop and a 12 pound flywheel took over the job of the original item which had weighed considerably more. A Weiand head capped the barrels and a pair of Stromberg 48's mounted on a Burns manifold took care of the carburction system.

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The deeply channeled body brought the floor high above its original level so the stock windshield height was retained to afford wind protection for the driver. The result is a glass height nearly equal to that of the body itself. Unusual but functional.

White Naugahyde, pleated and rolled, was used to pad the interior of the cockpit while

Four barrel Ford C engine packs 211 cubic inches. Burns manifold mounts a pair of Stromberg 48's. Satin chromed exhaust header leads to muffler beneath cockpit, then divides into twin outlets. Wooden firewall, neatly finished, replaces old panel. The frame rails are from a '27 Model T.



ROD AND CUSTOM, JULY, 1954

a maroon carpet, with white piping at all seems and edges, was installed under foot. The dash is as free from overcrowding as

any car that has been our pleasure to pre-sent. The two center-mounted instruments record the amps and the oil pressure — nothing else being considered by the owner as being essential to successful operation of this outstanding street roadster.

The car was only recently completed in time for the '54 Oakland Roadster Show so

it has not yet been subjected to the rigors of a drag strip run — but go it should!

Now that the car is complete, Charles has to be careful in selecting would-be riders the floor shift discourages a third passenger making this a T For Two.



Tremendously high windshield keeps wind from driver's eyes. Ground-scraping front radius rods are soon to be split and mounted individually to each frame rail. Striping on tail section gives indication of painstaking work that went into the building of this roadster.



ROD AND CUSTOM, JULY, 1954

The Barris Korner

How To Do It — Cadillac Hubcap Conversion.



A

Universal 15" beauty rings will be used as the method of attachment of the Cadillac discs to any make of 15" wheel. Lay the ring along the outer edge of the upturned Cadillac hubcap.

E

Using a scribe or a piece of chalk, mark a line on the inner panel of the hubcap which serves to denote the inside diameter of the universal beauty ring. Job will not mar finish of hubcap.

C

Using a straightedge, measure in one inch on the disc inner panel and scribe a second line. This line determines the mark for cutting step which follows so it should be clearly visible.

Follow the inner marked line carefully with a pair of the snips. The process illustrated will serve to provide ease of installation of Cadillac disc on any make or model of auto.

E

Mark off V sections, approximately 2½ inches apart, around the circumference of the newly cut line, then cut with tin snips. This will let metal band between scribed lines bend up.

=

A pair of pliers is used to bend up the tabs until they touch inner circumference of the beauty ring. Notice that disc is placed on a cloth to afford protection to polished surface.

G

The universal beauty ring can now be brazed or bolted to the tabs of the hubcaps. All that remains is to snap hubcap onto car wheel. Total time for four discs shouldn't take over one hour.

ROD AND CUSTOM, JULY, 1954

LAST MONTH in this column we discussed the advantages of installing various hubcaps on a kustom car. As was pointed out, a hubcap is probably the largest single expanse of chrome, or stainless steel, on the modern car so it should be made to look as attractive as possible. Enthusiasts used to be content with merely installing hubcaps from a different make of car but nearly all the possible combinations have been used up now so the search is on for wheel discs of still a different nature.

Most of the examples used last month were based on variations of the '53 Cadillac hubcap—an increasingly popular item despite its parentage. No sooner had the issue hit the stands than we began receiving correspondence from enthusiasts, most of which read something like this: "Cadillac hubcaps would look fine on my Chevy but how in " # \$ % * can I mount them? No matter what I do the doggone things just won't fit."

Before too many readers throw up their hands in horror, after having spent their monthly allowance on the discs, here is the quickest, easiest and best way to mount '53 Cadillac hubcaps to cars of any make.



ROD AND CUSTOM, JULY, 1954

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or retal ur. Don't tangle with this Plymouth unless you want the surprise of your life.

One for the Road

ONCE UPON a time there was a man with an ambition. There was nothing very different about him, really, he was just like a lot of us. However, he succeeded in turning his wishful thinking into reality, which is a

very commendable attribute. What was his ambition? He wanted a car that was so different from the everyday, runof-the-mill car that people would do a double take when he cruised down the street. Just what it was to be exactly he didn't know for a long time, but one day his luck changed and his car-to-be rolled into his life.

Albert Cox, Jr., is employed as a body and fender man for a Los Angeles Plymouth dealer. The agency, naturally, sells new cars which makes it to the dealer's advantage to have a used car lot in conjunction with the sales department. Few of the employees could believe their eyes when a customer drove up in a beautifully original '34 Plymouth coupe. Trade in? Sure, the agency would be glad to allow the man \$65.00 on a new car sale.

Al took one look at the then fifteen year old car and decided that it was for himregardless. No sooner had the customer left in his newly acquired car than Al made arrangements to buy the old trade-in.

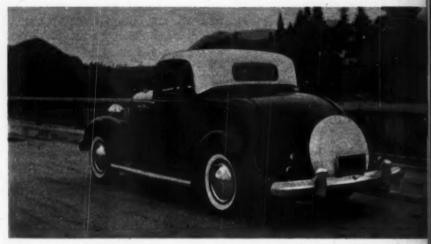
The little Plymouth ran reasonably well. despite its age, but, and most important, the car's body and chassis were as sound as the day it rolled from the factory assembly line. The fenders, and the metal in general, show-ed but little signs of damage and enough still remained of the original paint to have prevented rust from taking over. The interior, showing unmistakable signs of hard usage, still retained the original fabrics, tired and worn though they were.

Albert drove the car to and from work for several years. The engine rattled a little but oil and gasoline consumption were negligible and the car delivered many thousands of



Cax's Plymouth poses proudly beside one of its brethren. Ahead-of-the-times '34 Plymouth was equipped with individually sprung front wheels and hydraulic brakes—rare 20 years ago.





Albert Cox's '34 Plymouth, though not modified externally, has enough internal alterations to satisfy even the most avid enthusiasts. Olds engine with HydraMatic gearbox constitutes the power plant and trans. Rear end is a '53 Ford. Original car was purchased for sum of \$65.00.

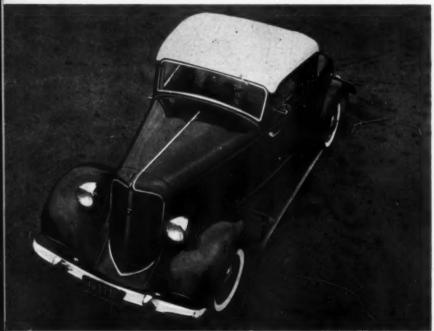
The fenders are separated from body and other adjaining panels by added chrome-edge beading. General appearance of car belies the fact it's approaching its twenty-first year of existence.



ROD AND CUSTOM, JULY, 1954



Bird's eye view discloses canvas covered turret top and matching white spare cover. Non-chapped and un-channeled, car nevertheless causes heads to turn as it passes due to bright maroon paint.



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ROD AND CUSTOM, JULY, 1954

trouble-free miles to its new owner.

The Plymouth was not Al's sole means of transportation—not by a long shot. His garage included a Jag roadster and a Muntz Jet. Trips across the country were generally made in the Muntz which, Al steadfastly claims, is one of the finest American cars that money can buy.

The passing years saw more and more Muntz cars roll onto America's highways while Jaguars became as plentiful as they would probably ever be. Al no longer owned two unusual cars so he slowly became dissatisfied with them and took to driving the

Plymouth more and more.

While on an errand for the agency, Al spotted a demolished '51 Olds braving the ravages of the weather in the rear of a wrecking yard. An inquiry disclosed the fact that the Olds still contained its engine and that said engine was for sale — providing it could be gotten out of the crumpled remains of the once proud car.

Al went home to consider the feasibility of uniting an Olds engine with his little Plymouth, after which he took tentative measurements of the space available beneath the hood of his tired Chrysler product. It gradually became evident to Al that the installation, while not impossible, would require a certain amount of doing — however, the fact remained that the job was within the realm of possibility.

To make a long story short, Al decided positively to make the switch — unbelievable as it may have seemed to fellow employees at the Plymouth agency — and then and there

the change began to take place.

Off came the front fenders, hood and grille of the stout little Plymouth. Out came the tired, but brave, little engine and also the worn transmission. The steam cleaning rack brought to light the shape and location of crossmembers and gussets for the passing years had blessed the frame with an overabundance of grease and grime.

And so it went. Off came this, changes were made to that, bracing was added here and brackets welded there. Eventually the sizeable ohv V8, complete with its HydraMatic transmission, was carefully lowered into place and bolted home.

Trial runs with the car showed that few engine modifications were necessary for the comparative lightness of the coupe gave its owner the power-to-weight ratio desired.

Low gear was utterly fantastic, due to the low ratio of the Plymouth rear end, but there was something lacking in high. The engine seemed to be all unwound at a relatively low rate of speed. The next few months were spent in searching for a superior rear end

(Continued on page 61)



Surprise! Dual-carbureted '51 Olds ohv engine nestles snugly into original-size compartment. Modifications are unnecessary for performance desired by the owner. HydraMatic transmission couples to late Ford rear axle assembly. Final rear end ratio is 3.4-1, tires, 6.70 x 15. Time in the quarter was 81 before rear end switch. Dual exhausts dump gases into stock mufflers.

Bud's Top Shop of Los Angeles is responsible for the white and red leatherette interiors.



A great many custom enthusiasts know bow to fill in a bole, how to french a seam or bow to install electrically operated door locks. However, it takes a certain amount of pure imagination to know how to position new exterior trim, to dream up a wild new grille idea or to design an appealing combination of upholstery colors and materials. Many are afraid to proceed with a particular idea for fear that fellow enthusiasts will not go along with the idea and look upon him as the laughing stock of the town.

The idea is not to copy another's designs or be too radical in the search for another answer to a common problem. A happy compromise must be reached somewhere along the line. Following are a few samples of various ways of restyling familiar components. Don't forget, it's . . .

THOSE LITTLE THINGS THAT ADD SO MUCH



The grille shell of the '49 and '50 Mercury provides an oval opening with nicely rounded edges that can be worked into nearly any late model American car. The shell itself comes as a single, wide unit and is available from any Lincoln-Mercury dealer. A certain amount of cutting and reshaping is necessary to fit it into a car other than that for which it was intended but the compound curves are there, to begin with, which makes the new shell an ideal panel.

The accompanying photo illustrates the use of a Merc shell as added to a '49 Chevralet. The installation, though, was not as difficult as the decision of what to use for a grille. The Merc grille was not deemed satisfactory for the job so a search was organized to find a stock grille from another car which could be easily installed. The result was the grille from a '52 Plymouth. The grille had to be narrowed slighth but this was easily done since the two wing bars are joined by boths beneath the center upright.

ROD AND CUSTOM, JULY, 1954

Still trying to make up your mind for a new illight-roor fender treatment? Here is a novel idea being carried out on a yet unfinished '53 Studebaker hardtop. The seam that formerly separated the rear fender from the quarter panel has been eliminated and a reverse trough formed by adding a half-section of steel exhaust tubing along the crown of the fender. The original taillights have been discarded entirely and the rear of the fenders given an undercut treatment. The new taillights are positioned directly above the rear wheels pointing along the formed troughs. The unusual treatment still makes the lights visible from the reat, and the side, of the car but leaves the rear of the car free from lights or lenses of any type. The car is presently being given the treatment by Lundquist Coachcraft of San Francisco and will soon be featured in a forthcoming issue of R & C. The photo is by the Hi-Mar Studios of Oakland, California.



Pontiac owners are often unaccountably overlooked in the customizing suggestion field. To set things straight here is a neat twist that should bring shouts of joy from owners of '49 through '51 models. The original taillight assemblies were removed and the exhaust pipes extended through the holes remaining. A length of sheet metal was formed and trimmed to fit atop the Pontiac fender. After a little welding, hammering and filing, the tubular sections had become part of the stock fenders and a set of '50 Oldsmobile 98 taillights were obtained and mounted. Duplicate Olds chrome taitlight rings were set around the protruding exhaust extensions. After final painting and polishing, the rear of the car had taken on a custom look without any terriffic amount of metal work. The resulting appearance is proportioned nicely to the overall styling of the car as a whole which is a matter that should be given reasonably careful consideration before a job of any great nature is undertaken. Car is a 1950 convertible. ROD AND CUSTOM, JULY, 1954



We are continually receiving letters from enthusiasts who, though they admit they have carefully followed a particular step by step How-to-do-it story, want even additional information than that which was made available to them. Headlight frenching, for instance, is one of the more commonly asked about projects. One writer even went so far as to ask that he be shown the bottomside of a headlight so treated. Never liking to be asked something which it can't answer, R & C herewith comes up with an unusual low angle shot of just such a thing I — a frenched headlight as seen from an ant's eye view. Like the top and the sides, the base of the headlight rim is welded or brazed to the fender and a fillet of lead is worked to the proper contour as dictated by the adjoining edges of the two sections of metal. Being difficult to get into tight corners with a body grinder, the base of a frenched light requires hand filing, a tedious job, true, but one which is just another Little Thing That Adds So Much.





Anything can run the quarter! Here an extremely clean track roadster gets off to a fast start.

THE



This street coupe is a combination car. Can be run at drags or in traffic without atteration.



A sight peculiar to the U. S. Bodyless rail job gets wave-off from starter. Looks don't count!

WHO IS to dictate the shape of a drag machine? A day of careful observance at any one of the many strips throughout the country should be enough to convince anyone that fast accelerating cars come in a quantity of shapes and sizes. Some are short and low, some are long and narrow while still others are wide and high. Some are equipped with engines where one would rightly expect to find them—under the hood. A few seat the driver where the engine should be and vice versa. A rare item is a sedan with no hood—exposing an empty engine compartment—with the driver controlling the car from the back seat. Rare indeed, but several exist.

All have one thing in common — they were built to go fast. Fast, from a dead stop through a distance of 1320 feet — a quarter of a mile. Acceleration, that's the primary purpose.

Street roudsters, in fact street rods in general were the chief competitors back a few years ago when this whole thing began. As time went by — and speeds went up — enthusiasts gradually learned new tricks of the trade.

Chopped and channeled '32 Ford coupe is popular draggin' material, runs at lakes and salt also.



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ROD AND CUSTOM, JULY, 1954

Why do they look the way they do? What are their potentials?

DRAGGIN' MACHINES

Photos by Gene Stein



ROD AND CUSTOM, JULY, 1954

Tricks, meaning unusual touches here and there that slowly changed the appearance of the car from a street equipped machine to one stripped to bare essentials.

No radiator? Spectators were a long time etting used to seeing cars run without cooling systems or with nothing more than a pair of open-ended water hoses protruding from the inlet stacks. Experience, though, taught the competitors that a run of but a few seconds duration did little actual damto the engine while the lack of the radiator and water weight was a gain of tremendous proportions.

Dual rear tires? Imagine, if you can, the

look of amazement on the faces of the spectators several years ago when the first car to be equipped with dual tires for dragging was rolled up to the starting line. It was thought originally that the more rubber on the ground the better - time, and experience, has finally convinced even the most avid die-

hards that this was not true.

Roor engines? Within a few weeks after the first drag event the competitors had it figured out that weight over the rear wheels was the answer. If you can stop the tires from spinning you're bound to go. And go they did for what better way is there to shift weight aft than to put the engine behind you?

Rull jobs. People laughed when someone removed the body from his car and then rolled just the chassis to the starting line. At the time top speeds were not within the range of today's marks and streamlining was not considered to be the most important factor. Reduce weight! That was the byword of the drag strips. If you can't get any more horses from your engine, increase your power-to-weight ratio by eliminating unnecessary deadweight. Right?

Speeds? People in general were amazed to hear that so and so turned 80 mph in the standing start quarter mile. The amazement, though, did not concern the fantastic speed rather it was a question of, "His car looks like it ought to go faster than only eighty." That was the question until they themselves took their family sedan out on the strip and found that it would not surpass the 60 mph mark. Those were the days before the Olds 88 and the beginning of Detroit's hp race.

Holes? Holes were never before in such predominance than at a drag event. Everything was filled with holes - round, square, oval and rectangular holes. The formula for reducing weight: Eliminate every conceivable thing, then drill holes in what is left. Simple? It was until holes began to appear in engine blocks, axles, transmissions, brake shoes (backing plates alone were old stuff) and even steering wheels. People haughed at the ridiculous situation but even as they did speeds began to climb weekly.

Back before the turn of this century when traveling about without the use of a horse was something only the extremely wealthy could do, it was the general belief that no man could exceed 60 mph and live to tell the tale. Such a thought probably passed through the mind of the first drag artist who reached the magic 100 mph mark on the strip. He undoubtedly returned to the line with tales of fantastic acceleration, of unknown forces tug-ging at his steering wheel, of herce winds lashing his face and whipping through his



shirt. He excitedly pointed out, probably, that his rear tires could not grip the asphalt during the run, that he spun rubber all the way through the quarter. To proceed beyond the 100 mph mark was likened to leaping off into the unknown.

Had the drag enthusiasts but turned to the writings of the Land Speed Record holders they would have learned that man had greatly exceeded this acceleration figure on the ground years before with no apparent effect. Those that did read, though, brought up a point. The great percentage of the Top Record cars were giants compared to the stripped down, old model production cars that had virtually taken over the drag strips.

Slowly but surely speeds went up. From all corners of the country came the word that someone had reached 110, by the end of the

quarter, 115, 120.

And so it went. Some forgotten individual took up his slide rule and discovered that 167 mph was the fastest anyone will ever go in 1320 feet from a standing start in a machine propelled through its wheels by an internal combustion, reciprocating engine. That was theory, though, based on too many unknowns.

The first issue of ROD & CUSTOM, back in May of 1953, pointed out that the 167 miles per hour speed was the theoretical maximum that could be attained. Since that time it has been determined that spinning tires can conceivably produce more than 100% efficiency while those that do not spin have a lesser coefficient of friction.

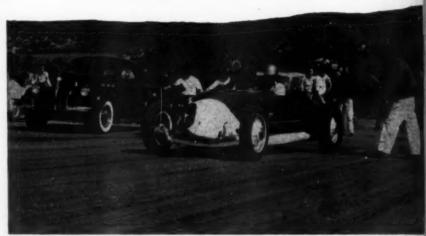
At the present time 100% efficiency between the tires and the ground has already been exceeded and speeds continue to climb. Up and up they go. Faster and faster. Speeds will continue to increase as time passes us by. The weird appearing cars on these pages may give way to others even more unorthodox in design. Where will it all end? It probably won't until air travel replaces land travel—and that we hope, is a long way in the future.



Dual purpose lakes-drag roadster, with engine behind the driver, ready for elimination trials.

A special breed of dragster, Draggin' sedan is also used on dry lakes and at Bonnèville.





ROD AND CUSTOM, JULY, 1954

TENNESSEE

JUST ABOUT a year ago R & C featured an unusual Model T Ford. The particular car had two front ends—one pointing forward and the other facing aft. To celebrate the twelve intervening months, here is still another unusual Model T—to say the least.

The car in question is — or was — a 1921 roadster. But, oh!, what it has gone through Most of us are undoubtedly familiar with the troubles encountered in a sectioning job, or the hassle involved with chopping a top. Problems arising from these operations are practically nothing compared to the difficulties in narrowing a car — which is exactly what has happened to this T. Not only was the body and the other visible components narrowed, but the front and rear axles, the springs, the frame crossmembers, in fact, everything that ran horizontally across the car had to be similarly altered.

As if that wasn't enough, the car has also

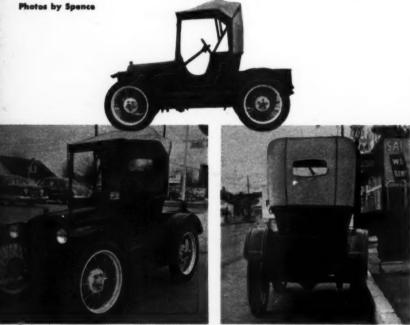
been shortened. This required the removal of a large percentage of the frame rails and the elimination of the familiar T tail section.

The lack of interior room made it necessary to position the planetary shift lever outboard of the body.

It is not known who is responsible for the astounding amount of labor put into the creation of this unusual vehicle, but owner Frank M. Jones, of Memphis, Tennessee, reports that it draws a good many of the curious into his service station.

Besides serving as an advertisement for the station, the car runs errands and can quite often be seen threading its way through holes in traffic where other cars could barely edge in a fender.

It's unusual, we must admit, but it is rolling proof that nothing is impossible when one puts his mind to a chore and sees it through to the end — regardless!



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ROD AND CUSTOM, JULY, 1954

READER'S CAR OF THE MONTH

THE "KRANKERS" car club, of Riverside, Calif., boasts a president who does not like to be outdone by members of his organization. To keep one jump ahead of them, he has moderately, but effectively, customized his '50 Ford coupe.

A four inch lowering job all the way around brought the car down to the height owner Bert Leithold wanted. Lowering blocks took care of the rear while reworked springs dropped the front the required amount. The door handles have been removed and at present Bert is working out the problems involved with electrifying the latch mechanisms. The trunk solenoid, though, is in operation and all one has to do to gain access to the luggage compartment is to press a conveniently located button on the dash.

The hood and the trunk have been filled

and the grille altered so that it no longer features the familiar spinner so common to this popular model. Removal of the spinner made it necessary to use a '51 Ford top grille bar and the cutout in the hood had to be filled with 18 gauge body steel.

Pacific Auto Top Shop, in Riverside, is

responsible for the outstanding interior treatment. Featured colors are grey and white, both of long-wearing Naugahyde material.

Corona's Al King beautified the coupe with a spray gun and generous amounts of '53 Buick Mandarin Red.

Bert's engine is stock, though the situation isn't to remain as such for very long, but nevertheless the car succeeded in turning a not-too-bad time of 74.89 at the famed Pomona drag strip.

"The look" was further enhanced by the addition of '53 Cadillac hubcaps, Chevrolet license brackets and the removal of the orig-

inal upright bumper guards.

Bert Leithold receives R & C's heartiest congratulations for owning this Readers Car of the Month and, in addition, will receive a one years subscription to the magazine.

Your car probably warrants coverage on this page, just get out that camera, shoot up a roll or two of film, jot down the information governing your pride and joy, and drop it all into an envelope addressed to ROD & CUSTOM, 4949 Hollywood Blvd., Hollywood 27, Calif. That's all there is to it.









TECHNICAL TIPS

TRANSPLANTED HP

I recently purchased a '50 Olds V8 engine for my '48 Ford. The Olds engine has a HydraMatic transmission which I will discard in favor of using the stock Ford unit together with my Ford clutch. If this is possible, where can I purchase a kit for the conversion. Since no one in my area has any information on this switch, your help will be greatly appreciated.

Rich Fremont

Bridgeville, Penna.

 No one, to our knowledge, manufactures a "kit" for this engine conversion. The only item available for the switch is the necessary adapter plate. One may be obtained through the McBar Machine Shop, Inc., at 65 N. Miami Street, Peru, Indiana. Tech. Ed.

DISPLACEMENT CHANGE

Will an increase of engine displacement affect the compression ratio?

Richard Mihna . Cleveland, Ohio

• Yes. Compression goes down as displacement goes up. Tech. Ed.

FORD ROCKERS

I have a '53 Ford 6 and would like to install high lift rocker arms. Where may they be obtained and is it necessary to use them on both the intake and exhaust? Would I realize an increase in power?

Dan Testa Akron, Ohio

 B & B Automotive, 546-A West Broadway, Glendale, Calif., is currently working on high lifts for the Ford 6 and by the time this sees print they should be ready commercially. If they are not available at your local dealer, try writing directly to the manufacturer.

It is necessary to install the high lift rockers on the intake valves only. Increase in power would be similar to that realized by the addition of a mild cam. Tech. Ed.

IT CAN'T BE DONE

In reference to Navarro's article in the April '54 issue of R & C. He states that a .065" hole should be drilled in the check valves on a dual carburetor setup to cut the total discharge of fuel in half when the throttle is opened.

To start with, I don't think a .065" hole could be put through the check valve without going through and ruining the ball seat.

Secondly, the standard dump valves in the bottom of the discharge wells are a #65 drill size and not .065". My drill chart shows a #65 drill size is equivalent to .035".

So, to cut the total discharge in half without effecting the upper end performance, you would have to drill the check valves with approximately a .017" hole or a #77 drill.

I hope that the .065" hole as mentioned in the article is merely a typographical mistake. Don Banks Reno, Nevada

 It was. The article should have stated that a #65 hole should be drilled rather than one of .065".

HYDRAMATIC HOOK-UP PROBLEM

After weeks of struggling, I have finally succeeded in installing a '52 Olds engine with HydraMatic transmission in my '48 Ford. The shift linkage works fine but there is no way that I can see to connect the secondary arm of the HydraMatic to my throttle linkage. Is it absolutely imperative that this link be installed?

Ralph Caldwell

Jerome, Ariz.

 Yes. The "secondary arm", as you call it, governs the shifting of the HydraMatic in direct proportion to the amount of throttle applied. Proper shifting will not be possible if this linkage is not included. Tech. Ed.

HEATING

How do so many rods run on streets without a fan, yet do not heat up? I have a '32 Ford with a '41 Ford V8 in it and would like to take off the power-robbing fan but am afraid the car will boil if it is forced to idle while it is in heavy traffic.

Ralph Kepner Port Royal, Penna.

• Most well built rods are actually overpowered so do not use all of their potentialities while driving in the city. In effect, they use but a small percentage of the power available so the lack of a fan does not present too great a problem. However, even the best of them will buil if forced to idle for long periods. If you want to remove your fan there are two alternatives. Either avoid rush hour traffic as much as possible or mount the fan so it can be run from a small electric motor. This way the fan can be stopped at will and is not being driven by the engine.

Tech. Ed.

ROD AND CUSTOM, JULY, 1954

ENGINE DAMAGE

I am in need of some advice. I own a '42 Chevy and am doing a little work on it, I want to split the exhaust manifold to add dual pipes but my father says that it will add nothing to the performance of the car and might cause the valves to warp. Could you set us straight on this?

Buck Mickey

Albany, Ill.

· Dual exhausts will help your Chevrolet engine but probably not enough for a noticeable difference. Dual exhausts do not increase the power of an engine by relieving the back pressure as so many people incorrectly be-lieve. What they do do is give the engine better breathing characteristics thus producing improved performance. As for burning or warping the valves, the idea stems from the belief that cold air entering the exhaust ports will damage the hot valves. Naturally, no air enters the exhaust ports while the engine is running so this belief is wrong. Another argument is that cool air will enter the exhaust ports when the engine is turned off. True, this may damage the valves if the exhaust pipes are extremely short. On a normal passenger car, any air entering the tailpipes and eventually entering the ports would become almost as hot as the valves themselves since this air must pass through the warm tailpipe, the very warm muffler, and the extremely hot headpipe. Hate to argue against your father, but I'm afraid I must. Tech. Ed.

CLASSROOM PROBLEM

The time has finally come for me to write to you. I have been having a discussion with a friend of mine at school. We recently had a movie on internal combustion engines. After the show the argument started between my friend and the instructor. My friend says that a 6 or 8 cylinder in-line engine receives more fuel for the center cylinders than those on the end. The instructor says that all cylinders are fed equally. I told them I'd write to you for the answer. Which is it?

Ernie MacDaniel Shady, New York

• Hate to go against your instructor, Ernie, but I'm afraid your friend is right. Fuel, contrary to popular belief, is not rightfully composed of a vapor. A PORTION of it is vapor, but also included are small droplets of fuel. Being heavier than the fuel vapor, the droplets have a tendency to fall from the vapor. The several center cylinders receive more droplets of straight fuel than do the cylinders at either end. An in-line engine actually runs off-balance, as it were.

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If so, its name

I wish to join Drag Races, Inc., for a minimum of one year, so am enclosing \$12.00.

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CUSTOM

TIPS

TOP CHOPPING

I have been thinking of chopping the top of my '50 Mercury and would like to know if, and when, you have ever had an article covering this procedure.

Bill Manny Hawthorne, Calif.

• "How To Chop Your Top—The Right Way", was featured in two parts, May and June '54 R & C. The job followed from start to finish chopping a '54 Chevy pickup truck. Though the problems involved in this were not necessarily the same as yours, the article should give you a good idea of what to expect as well as how to proceed with the various steps in their proper order.

LEADING

I am an ardent reader of your magazine and enjoy it very much.

I need some information on leading. I want to smooth the hood and trunk of my '38 Ford but have had no experience along these lines, Can you help me?

Fred Fanton Estes Park, Colo.

 Welding, brazing and leading, all of which are necessary for filling such holes as you will find in your hood and trunk after removing the ornamentation, were described in detail in R & C for October, '53.

FENDER FRENCHING

Could you give me some information on leading the rear fenders to the body of my '36 Plymouth?

Brad Park Moline, Ill.

• To french your rear fenders to the body proceed as follows: Loosen the fender bolts and remove the welt separating the two panels. Then re-tighten the bolts and spot braze, or weld, the two panels together at several points along the seams. Welds should be about one inch long and not over 5 inches apart. Clean the area of paint and any rust that may be present and lead the seam in the usual manner. A word of warning: Frenched fenders are not easily removable so consider carefully before proceeding with the operation!

CHROMED HEADLIGHTS

I have noticed in many of your previous issues that most of the street rods you have featured have had chrome plated headlights. I have searched high and low but can't find any. Where do these rod builders get them. Also, I need a '29 A radiator shell. Anyone have one around?

P. J. Reymond

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1717 Gould Ave. Clarksburg, W. Va.

• Some of the larger accessory houses in big cities carry chromed headlight shells. If there are none near you you might inquire to some of the advertisers in R & C. Other than that, our only suggestion would be to have Model A (or similar) headlight bodys chromed.

GAS FILL PIPE TROUBLES

I would like to restyle the taillights on my '36 Ford but have run into difficulty. The gas fill pipe extends through the base of the left taillight. If I removed the light, and its base, the fill pipe would extend several inches above the fender. How can I eliminate this trouble?

Roger Eickhoff

Falls City, Nebraska

 Your fill pipe neck can be shortened so that the cap is flush with the fender or you can shorten the neck even more and add the cover flap from a '41 Ford or any car having this arrangement. In this manner the cap will not be visible until the flap is raised.

RESTYLING HINTS WANTED

I am the proud owner of a '46 Ford club coupe, I want to do some work on the body but am not sure just where to begin. I would like to remove the taillights and replace them with lights from another car that will help rid my Ford of its apparent "tubiness" when viewed from the rear. Anything you can suggest would be very much appreciated. I would also like to know the prices for various operations (deck filling, hood dechroming and seam frenching), as charged in my area.

Bob Viseth

Malta, Montana

• Here we've just begun this regular column and found ourselves up against two problems already. Problem No. 1: Customizing suggestions for specific cars, and No. 2, listing prices for specific customizing jobs. We'd best go on record as saying that we cannot suggest specific alterations for what may look good to us may not look good to the particular reader—hence wasted space. Secondly, the prices charged for customizing are primarily labor charges. We have no way of knowing how long it will take a particular shop to do a specific job and, moreover, we do not know the rate per hour charged by shops the country over. Sorry, Bob. FRAME WORRIES

Will a Model T body fit on a '32 Ford frame? If so, what model body? Would it require extensive modifications?

Bill Sullens

Wichita, Kansas

 T bodied roadsters probably use the '32 Ford frame more often than any other. Nearly any T body (coupe, sedan, roadster, pick-up) from the years '22 on up will fit with but little rework.

MORE ABOUT CUSTOM COST

I have a '41 Chevy convertible and would like to know how much it would cost for the following work: Four inch channel job, four inch chop job and a radical frame kicking up. Ron Thompson Tacoma, Wash.

Again, prices vary Ron. It's up to the individual body men. About \$300.00 should cover the channeling, around \$125.00 for the windshield and the various glass frames to be lowered (not including a new top). The frame kicking should be close to \$100.00 depending on how it was done, and how much it was raised.

RESTYLING COST

I am planning on buying, and fixing up, a '40 Ford coupe. How much would it cost to have the usual modifications performed? Also, I have seen a lot of pleated and rolled upholstery. Is there another way to upholster a car? I would like something just a little different from all the rest.

William Case

Belleville, Mich.

Since customizing charges are made up
of approximately 90% labor and but 10%
material, the cost for custom work would vary
throughout the country depending upon the
availability of a reliable custom man. However, following are a few prices which should
be more or less standard throughout the
states:

 Frenched headlights
 \$45.00

 Fill all trunk holes
 \$25.00

 Bull nose the hood
 \$20.00

 Two inch top chop
 \$250.00

 Fender skirts
 \$20.00

 Lowering (front & rear)
 \$15.00

 (Front end realignment)
 \$7.50

 Total \$382.50

As stated these prices would approximate the costs indicated for a '40 Ford coupe.

As for upholstery is can either have pleats and padding or it can't. Possibly you can attain the "different look" you desire by using unusual shades of material. A quality upholstery job would run close to \$200.00 depending, again, on the cost for labor in your area and for the material used.

our reader's customs...



ZION CUSTOM

I'm sending you a photo of my car which I hope you can use in Readers Customs. I am in Korea at the present time and would greatly appreciate seeing my car staring at me from out of the pages of R & C.

Following are the modifications I have

made to the car:

The bumper is a '49 Ford station wagon model slightly narrowed and with exhaust tips added. The fake spare tire is composed of two '38 Packard sidemount covers welded together. The whole thing is welded to the deck lid and opens with it.

The rear fender taillight fairings were heated and shrunk which eventually eliminated them. The radio antenna has been

relocated on the trunk.

The door handles were removed and electric solenoids installed. The buttons are in

the side chrome strip just behind the doors. The dash is covered with black leatherette with a sponge rubber base. The hood has been filled and a solenoid installed like those in the doors. The headlights have been recessed and frenched.

The two tone colors are metallic green and Desert Tan. As soon as I get out of the service I hope to hop up the engine and reupholster the interior.

Richard J. Cade

Zion, Illinois

· Hurry home, Dick.

MISSOURI ROD AND CUSTOM

Many thanks for your magazine ROD & CUSTOM. Incidentally, I have one of each myself — a Rod and a Custom, that is.

The rod is a '30 A on a shortened '35 Ford frame. It has been channeled 13 inches. (Ed. note: That stands as a Readers Customs record.. Thirteen inches!) Since I am conservative minded, the 59 A block engine is stock except for .080" over bore. The transmission as well as all the suspension parts

are '41 Ford. The Model A rear end is the only exception.

The paint, flaming pink, the upholstery and all the other work was done by myself and since it was my first attempt at anything of this nature, the experience I gained was worth plenty.





The conservative custom is a '51 Ford convertible. The grille is from a '49 Mercury. The rest of the car has been treated in the usual manner—continental spare tire, dual mufflers, shaved hood, wire wheels and a mild lowering job. The color is Coral Flame red while the top is black.

R & C is great - keep it up!

Jerry Montgomery Afton, Missouri

• We'll try, Jerry. Wonder how many other readers own both a Rod and Custom?

HMMMMMMI

I've been reading issues of your magazine since its birth, keep up the good work and you can't go wrong.

you can't go wrong.

Just in case you'd be interested in the marriage of an American Austin and an MG, I'm sending along some shots of one.

The rear end of the Austin was cut off completely and the tail section from an MG added. The rear fenders have been leaded to the body sides.

Other modifications include cut down MG headlight brackets and fog light bodies with small, clear sealbeams installed; Model T spare tire bracket; ¼" plate fabricated windshield brackets; tinted safety glass and .050" milled from the head.

ROD AND CUSTOM, JULY, 1954



Color is Apache Red - synthetic enamel - and the interior is red and cream leatherette.

The car will do 45 mph and gives a constant 40 to 45 miles per gallon of gas. It

weighs 1220 pounds.

The car has been displayed at the Oak Knoll Concours d'Elegance, where it won first place in the antique class, and it took second at the Hayward Airport Concours. I've also had it in the San Francisco Motor Sports show.

Frank Volta

San Rafael, Calif.

 That's an interesting combination, Frank. Hope our readers will appreciate the prodigious amount of work involved. The car's size gives no indication of the labor involved in the project.

RESTYLED CATALINA

I bought my car 14 months ago when I returned from Korea. Since I was still in the service and had to travel from base to base, the body work was done, a little at a time, in shops throughout California. Because the car had to sit out a good part of the time, I painted it primer and only recently added a deep metallic green lacquer job.



ROD AND CUSTOM, JULY, 1954

The door handles have been taken off to clean up the lines of the Pontiac. The rear end was dropped 4" by installing lowering blocks and I added Mercury skirts which fit on the outside of the fender instead of being inset.

The side chrome strip has been shortened and it now ends in the center of the door. A continental kit aids the rear appearance

and finishes off the job. Robert Dupont

San Mateo, Calif.

READERS NOTE. This column cannot centinue unless you send us quality photos of your cars. Be sure that photographs include all of your car—don't let the edge of the photo cut off your front or rear bumper. Sorry, but submitted photos cannot be returned—and, no Kodecolor prints or negatives—please!

L. A. FORD

The hood, deck and fenders of my '41 Ford have all been leaded in. The stock Ford taillights have been replaced with those from a motorcycle. The engine is stock right now but won't stay that way for long, I hope.

Larry Sanford

Los Angeles, Calif.



MODIFIED IN MINNESOTA

Thought maybe you'd be interested in a photo of a Minnesota custom. My '46 Ford convertible has been chopped 3". The front is lowered by a dropped axle and the rear by longer shackles. The nose and deck have been shaved. The grille is from a '50 Oldsmobile and both bumpers are from a Dodge. Rear fenders are molded to the body. A lot of the exterior trim has been removed and the holes filled. The paint is a ten coat lacquer job and the padded top is white.

The interior is upholstered in black and cream leatherette. Most of the dash and all of the window moldings are chromed.

of the window moldings are chromed.

The engine is a '48 Merc, hored .040" over, ported and relieved and with a Webs.

4 cam. It also has a Weiand dual manifold with Stromberg 97's. The exhaust is handled

(Continued on page 65)



THAT'S RIGHT! Stop punching holes in fenders and body panels for those aerial installations.

Rod and Custom owners throughout the country have always been plagued with the problem of finding a place for that unsightly antenna. Seems a shame after spending hundreds and sometimes thousands of dollars to customize, streamline and perfect a super job, and then have to decide on a spot that will not be damaged with such an installation.

Countless times, after completion of a new custom job, the car owner and shop operator have walked round and round the creation, the worker with a large hammer and the biggest punch ever made and the owner with frightful misgivings, looking for a panel to destroy. One just cannot have a custom without a radio ... and along with the radio inevitably comes the antenna. Not only is the finished panel damaged but after the installation the gangling chrome aerial seems to throw the well designed custom into a state of pictorial imbalance. Roadster owners have invented many new vehement adjectives when referring to them. If only someone, somewhere would develop an auto receiver that had no need of an antenna or unsightly aerial - their most perfervid prayer would be answered.

We, at Rod and Custom, have searched high of the answer to this serious problem and finally found the solution right under our noses. Here in Los Angeles we ran across a man that has spent more than two years working on the project of inventing and perfecting what he calls the "NO-TENNA."

No more fender-top, cowl or rod-type antennas for owners in this area; for Al Davis has put an end to it all. His "NO-TENNA" installation is a departure from, and an almost complete reversal of, heretofore accepted methods of receiving transmitted signals from the air. Signal input strength becomes so strong that standard receivers will not successfully handle the readily available power unless input changes are made in the receiver. Have you ever turned the volume up on your home console, with its large speaker, until the whole cabinet seems to vibrate? This same signal strength becomes a reality in an automobile equipped with a "NO-TENNA" in-

stallation and, as an added advantage, many new stations are brought to life where nothing but static existed before.

Any exterior antenna, in order to approach a comparison considered favorable with the "NO-TENNA" would have to extend at least nine feet above the auto body and would have to be positioned, with utter disregard to all the owner's design problems, at a point of ultimate advantage for the receiver. Imagine a chopped and channeled custom, a roadhugging roadster or an expensive foreign car, all designed to give that low, streamlined appearance, buzzing down the highway with what looks like a towering chrome flagpole protruding from its sleek shell. We do not have to imagine it for we have all seen this abhorrent sight many times over.

Unfortunately, for those of an excessively curious nature, we are not allowed to disclose Mr. Davis' secret method of achieving this miraculous answer to our prayer; but then, what care we, for we are primarily interested in the solution of the problem and not in its extremely technical explanation.

The one remaining problem is that of making possible a national supply of "NO-TENNAS". Due to the slight, yet imperative, input changes that must accompany each installation Davis is reluctant to depend on the mail order novice's untalented attempts at remodification. We are forced to agree with him and can liken his feelings of caution and apprehension to those of Offenhauser, McCulloch and Stewart Warner whose respective racing engines, superchargers and delicate instruments must also be completely assembled and tested before leaving the shop.

Progress is being made, however, in an attempt to perfect a mailable unit that can be installed by anyone. Perhaps, through a manufacturer's cooperative program in the near future, a large concern may convert entirely to this revolutionary type of auto radio reception and custom and roadster fans throughout the country will be able to take advantage of it.

Until that time, enthusiastic car owners are driving in from neighboring states for installation of the new "NO-TENNA".

BONNEVILLE IS JUST AROUND THE CORNER!

If you are planning on making the trip to the Bonneville National Speed Trials this year for the first time, be sure your stack of back issues includes the December '53 number. If not, better get one while they're still in stock - they're going fast and won't last much longer.

Read about the historical background of the famous Salt Flats - why they are there and how they were discovered. Learn about some of the world's speed marks set years age. Ride to Bonneville with R & C in a hot

MAY, 1953

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54

Barney Navarro explains gear ratios. Custom '51 Oldsmobile, '50 Chevy, '50 GMC pickup and others. '32 Ford roadster, '27 Ford T and '41 Chevy hot rods.

JUNE, 1953

Exclusive coverage of the first jet propelled carl Two Ford customs and three outstanding rods. An Oldsmobile styled for the future. Beginning of the 5 Ways To Power by Calif. Bill.

DECEMBER, 1953

Bonneville National Speed Trials. George Barris discusses chrome stripping. A trip to Bonneville in a roadster. Top record holding cars.

FEBRUARY, 1954

Comparing a Barris Buick to a 1910 Antique. What you should know about pistons. Installing sealed beam headlights on street rods. The actual efficiency of the modern engine.

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rod. Be able to compare new records this year with those set last year.

December '53 - ROD & CUSTOM's first stab at Bonneville coverage -by far THE MOST COMPLETE EVER PUBLISHED.

HURRY!! Several past issues are completely sold out and the remainder will soon follow. Catch up with your friends before this list dwindles to nothing.

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MAY, 1954

How to chop a top. Stroking vs de-stroking. Lincoln Capri custom. Fabulous modified T roadster. Installing airscoops without metal work or painting, Ideas for exhaust tips.

JUNE, 1954

How to chop a top, Part II. Hop Up road test. German custom Pontiac. Drag Races, Inc., 177 mph Chrysler-engined Ford coupe. Fastest accelerating car in the world! Sectioned 1941 Cadillac convertible. Two Willys with engine conversions. Custom cars and hot rods.

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Whatsit

7

Our "Whatsit?" for this month is something a little different. Instead of trying to identify a mystery car, see if you can answer the following four questions. Each has been answered in past issues of ROD & CUSTOM so dig into that stack of old magazines and see what you can come up with.

- What is the fastest speed to date to be reached at the end of a quarter mile drag strip?
- 2. What is the fastest speed ever attained officially by an American car?
- 3. What is the present Land Speed Record?
- 4. What is the fastest speed ever attained by man in an automobile?

Simple? You bet. Just jot down the four figures on a post card or letter and send it to ROD & CUSTOM, 4949 Hollywood Blvd., Hollywood 27. Calif.

Five winners will be chosen at random from anong those listing the four correct speeds. Deadline for letters is midnight, July 31st, 1954. The winners' names and addresses will be given in the October issue, on sale September 1st.

Please don't include your answers in correspondence intended for other regular R & C columns. Print "Whatsit?" on the face of your card or letter so your guess will be properly handled.

BE SURE to include your return address so that if you are selected as a winner, you will receive your year's subscription to ROD & CUSTOM.

Never before in the short history of this "Whatsit?" column have so many correct answers poured into our offices as did those concerning the April query. The car, you will remember, was described as having a 61½ inch wheelbase and a tread of only 38 inches. Overall height was at a minimum, too -37 inches! The car was small, indeed, and its name? -a Henderson!

As many of our responses pointed out, the car had a wooden frame and a Henderson engine which was equipped with a Bosch magneto and a Winfield downdraft carburetor. At the present time the car is the proud possession of Mr. V. A. Nation of the Thomas Magnesium Racing Equipment Co. in Los Angeles. The car is being restored to its former state and within a matter of months it will be ready once again to provide its driver with the thrills of bettering 65 mph—quite a feat in a car of 1918 vintage while sitting scant inches above the street.

The following five people were selected at random from among the letters received regarding the correct identity of the April "Whatsit?" Each will receive a 12 month subscription to ROD & CUSTOM beginning with this, the July issue.

Eddie Anglin, Summit, New Jersey. Gilbert Kelly, Omaha, Nebraska. W. L. Whitlock, Redondo Beach, Calif. Roy Rochon, Newport, Rhode Island. Tom Boulton, San Diego, Calif. Congratulations, fellows!

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ONE FOR THE ROAD

(Continued from page 43)

ratio but Al finally gave up the project and started casting about to find an entire rear end assembly that could be installed under the car with as little work as possible. It was eventually discovered that a '53 Ford rear end offered the greatest possibilities so after a little more changing, welding, and general modification the unit was rolled under the coupe and glued down - as the saying goes.

With the motive power and the running gear well taken care of, the owner turned to the more obvious portions of the car and began the long and painstaking job of adding the brilliant Mandarin Red lacquer job. The undertaking involved long hours of eliminating the small, but plentiful, dings and dents that the fenders had accumulated throughout the ages. Not to be forgotten either are the weeks of sanding and priming so necessary to a quality paint job. Prior to the actual spraying, the car was stripped of its hardware which was sent forthwith to the platers for a bit of re-doing.

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Al began the painting operation with 3 gallons of the lacquer color to which he added a few more gallons of thinner. Total ma-terial on hand for the spraying was approximately 8 gallons. Around and around the car he went. The car was lightly sanded between each coat to rid the finish of the unwanted orangepeel effect attributable to lacquer. Rubbing compound, applied vigorously to the finish, brightened the metallic red tone considerably, making the car stand alone like a cherry in a bowl of grapes.

Bud's Top Shop, in Los Angeles, was given the job of outfitting the coupe with a modernized interior. The finished compartment boasts leatherette of both red and white while the carpeting underfoot is maroon. Wanting to add something a little unusual to the exterior of the car, Al directed that the entire top be covered with white leatherette rather than just the original drab fabric insert alone. Bud agreed to do the job providing he received some assistance from the owner which he did. Though the result may look as though it was easily achieved, hours upon hours of stretching, pulling and tacking were needed before the men stood back to view their handiwork - both thoroughly convinced that no one in his right mind should attempt the same thing - ever.

One quick run at a nearby drag strip netted a casual 81.22 mph speed. This, however, was recorded with the low ratio Plymouth rear end. No times have been taken since the addition of the 3.4-1 Ford assembly but owner Cox reports that acceleration and third gear wind are far in excess of that before the switch was made. Many Ford en-

(Continued on page 65)

variety mart

Take a look under that workbench in the arage. What's that? A pair of old 21 stud V8 custom heads? There's a fella that wants them — somewhere. How to find him? Just send us your ad, in 25 words or less not counting your name and address, and Variety Mart will see to it that your extra equipment is quickly brought to our readers' attention. Maybe you're lacking something. Again, Variety Mart is designed to help you find what you are after. Variety Mart, c/o ROD & CUSTOM Magazine, 4949 Hellywood Blvd., Hollywood 27, Calif. NO COMMERCIAL ADVERTISERS, PLEASE,

SELL! 1946 Mercury, Leaded in, Carson top, custom upholstery and dash. Body work unfinished. Much modified engine, 1st in local show. Reasonable offer accepted. John Black, 100 Awixa Ave., Bay Shore, New York.

EXPERT CUSTOM MAN wants evening work. So. Calif. area. Any and all types custom work. Reference: '49 Chevy, June and Sept. '52 HOP UP Magazine. Phone EMpire 92839.

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INFORMATION WANTED! Need suggestions for restyling late Chevy pickup. See "Frame Arching" in this issue. Send ideas to ROD & CUSTOM, 4949 Hollywood Blvd., Hollywood 27, Calif.

EXTREMELY RARE! I have two extra copies first issue HOP UP Magazine, July '51. What am I offered? Both in excellent condition. Robert Johansen, 4630 La Canada Blvd., La Canada, Calif.

WANT TO CORRESPOND with anyone who has legitimately bettered 100 mph within last five years. Send age; make, model of car; location of run. John Lockhart, c/o KRSN, Los Alamos, New Mexico.

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(Continued on page 64)

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PORTING

(Continued from page 15)

already been stated, bell-mouthing or squaring of this port at its starting point must be avoided. The metal is removed diametrically around the port and a 6 inch scale or straightedge is used to test for bell-mouthing. If the straight-edge is held against the ground straight section of the port, any scooping or tendency toward funneling will be apparent from the angle which the edge will take when compared with the machined block surface, and also any high or low spots will be seen. When the 1½ inch passage has been ground to a true cylindrical shape and meets the scribed mark on the block the first part of the porting operation, except for polishing, is completed. From this point in the port both the shape and direction change. In postwar engines the passage becomes flatter, as if a thin rubber hose had been slightly squeezed, so that while the area remains unchanged the shape is wider at the side and narrower at the top and bottom.

Continuing to grind the ports of these engines, slightly more material should be removed from the sides than from the top or bottom of the port. Particular attention must be given to the last ¾ inch length of the port. This includes an inclination cast into the port to throw the mixture upward to the valve. Mistakenly thinking that this little slope is an unnecessary restriction, many persons reworking these engines grind this section away, unaware that by doing so they have promoted a turbulence in the incoming charge due to the flow striking the walls of the valve cup first. This incline should never be ground away. Only polish it. And go easy because the block is quite thin at just this point and should there be a shifted core or a sand-pit from the casting process there is

great risk of striking water!

The porting of the valve cup is done in accordance with the formula given earlier enlarge to the diameter of the valve head minus twice the width of the valve seat.

For early (pre-war) Ford engines, the porting operation is carried through as above, except that there is more latitude allowed in grinding the entire diameter of the port because the shape, unlike that of the later engines, is more rounded throughout.

As an aid to determine equality of area removed from all ports, a rubber ball of 1 inch diameter may be pushed through each port. When it feels as if it is meeting equal resistance the port sizes are probably quite close to one another. If the porting is done under strong lighting conditions the eyes are usually the best judge of equality of area, however. If you are familiar with the use of either an inside caliper or telescope gauges and micrometer the manner of measuring port (Continued on page 64)

ROD AND CUSTOM, JULY, 1954



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EDITORIAL

(Continued from page 5)

finer than being a staff driver for one of the large tire manufacturers. Happily, the friend's father knew a man, who knew a man, etc. As a result, after countless phone calls and interviews, friend was hired, during his school's summer vacation, as a driver, no less, in an auto convoy.

It seems that the particular company was undertaking exhaustive research on a newly developed tire and the driver's job was to break down the stamina that had supposedly been built into the product. Friend had visions of being presented a hero badge if he could display fabric in relatively short time. He long looked forward to police O.K.'d, flat-out speed runs across the desert. The departure time approached slowly for him as he lay awake at night thinking of the joys of tight turns or broadside spins on a paved testing oval. Unfortunately, he was wrong!

Friend was assigned to drive one of four cars, equipped with the new tires, and he received instructions to drive from So. Cal. to Reno, then on to Vancouver, B.C., then back to L.A. again. The only restriction placed on the cars, and drivers, was that they were to not exceed 15 mph. There was no chance for a little cheating since each car was equipped with a speed recorder that dutifully marked the precise speed on an endless tape. To top that off, each car included an observer who's job it was to keep a weather eye on the speedometer. Tires were to be checked for thickness and amount of tread, with micrometer accuracy, every two hours. Friend couldn't back down at the last moment so off he went—tears in his eyes.

The last time we saw him, several months later, he was smilingly going—flat-out—down the street on a bicycle. As far as we have been able to determine, friend hasn't set foot inside an automobile since the day he left for Canada—at 15 mph! Such is life.

TECHNICAL TIPS

(Continued from page 53)

OVER-POWERED

What is meant by the term "over-power"? I have heard this term often used regarding race cars and other types of competition machinery.

George Wolfson Salt Lake City, Utah

Over-powering generally means that a particular car has more power than it can use resulting in excessive wheelspin. It is commonly believed that any car that can spin its wheels is over-powered since the added power is evidently going to waste. However, it is generally improper gear ratios, awkwardly balanced weight or a combination of both that causes this situation.

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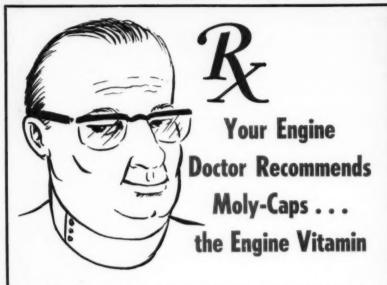
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